# CONJOINED TWINS*

(A Case Report)

by

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Conjoined twins, also known as "Siamese Twins" are very rare varieties of congenital abnormalities seen in obstetric practice. The term "Saimese" came into literature from the history of such twins born of Chinese parents in Siam who lived for a long time (1811-1874). These twins were xiphipagus and were brought to America at the age of 13 where they married subsequently and settled down as farmers. The earliest report of a case of conjoined twin was that of the "Biddendon Maids" born in England in 1100 A.D. They were born united from hips to shoulders with only one pair of upper and one pair of lower limbs.

The incidence of conjoined twins is very difficult to ascertain because of their rarity as well as for the fact that there may be some cases which are delivered at home and not reported. Newman (1940) and Potter (1952) reported the incidence to be about 1 in 60,000 deliveries.

The case presented in this paper is interesting in the sense that the patient came with the problem of repeated neonatal deaths due to jaundice and ultimately delivered a monstrous twin. A case of conjoined twins has been recently reported (Gupta and Wakhaloo, 1968), where the diagnosis was made before the babies were born. The diagnosis in this case was made only at the time of delivery, since the x-ray taken before labour was inconclusive.

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Received for publication on 3-10-1968.

## CASE REPORT

Mrs. B. R., 27 years, married for 7 years para 3, first reported on 4th March 1968 to the antenatal clinic with amenorrhoea of nearly 4 months and a history of repeated fatal neonatal jaundice in her previous two babies, delivered at home. There was no history of vaginal bleeding or discharge. She did not have any previous antenatal care but was reported to have been in good health. There was no history of taking drugs or medications, nor of any illness in the early weeks of gestation. Her menstrual history was regular and normal. There was no history of twins, hypertension or diabetes either in her case or in the family.

On examination, her general condition was satisfactory; haemoglobin 10.5 gm.%; urine showed no abnormality. Cardiovascular and respiratory systems were normal. There was no abnormality on gene-

ral physical examination. The height of the uterus was more than the period of amenorrhoea and foetal parts were not palpable. No foetal heart was heard, and no fluid thrill could be elicited.

Plain x-ray of the abdomen for evidence of foetal parts and examination of the urine for quantitative pregnancy test were advised. The x-ray report showed a doubtful foetal shadow and the radiologist suggested an oblique view of the abdomen for confirmation.

Ten weeks later, the patient was admitted with a history of diarrhoea and pain in the lower abdomen for 4 days and leucorrhoeal discharge for 2 days.

The height of the uterus was 36 weeks and fluid was excessive. Twin pregnancy was suspected because of the impression of too many foetal parts. Slight tenderness in lower abdomen was present. No uterine contractions were observed. Foetal heart sounds were present. Vaginal examination revealed that the patient was in early labour (os 2 cms. dilated), with breech presentation. A provisional diagnosis of premature labour of twin pregnancy with hydramnios was made. Investigations showed Hb. 11 gm.%, urine was normal and plain x-ray of the abdomen was inconclusive because of poor quality. Intravenous ethyl alcohol drip was started after admission, as it is reported to be effective in preventing premature labour (Fuchs, 1965). The alcohol drip was discontinued after twelve hours. The patient again started having uterine contractions about 7 hours after the drip was discontinued. About 5 hours later, vaginal examination showed the cervix to be six cms. dilated and membranes to be bulging. Controlled rupture of membranes was done and about 2 litres of clear liquor were drained. No abdominal tenderness or vaginal bleeding was observed.

The patient continued to have contractions every 5-10 minutes, lasting for about 30 seconds. After 4½ hours of rupture of membranes, the cervix was found fully dilated and two feet of the baby were felt lying in the vagina. Breech extraction was decided upon and while giving traction on the baby's feet, something was felt on the back of the baby. This finding along with the extraordinary difficulty in traction aroused the suspicion of conjoined twins. At that stage, an episiotomy was done. With a little more traction, the breech was delivered along with the other legs and the twins were seen joined together in the region of the abdomen. The cord was felt to be single. As the shoulders were being born, it was found that the twins had thoracopagus also. The shoulders were delivered without any difficulty. The after-coming heads offered no problem and these were delivered one after another. The placenta and membranes were expelled spontaneously. There was no post-partum haemorrhage. The episiotomy wound was stitched in layers.

The two babies presented a rare type of anomaly in that the line of fusion extended from the shoulders to the pelvis, i.e. the entire trunk, face to face with four upper and three lower limbs with a single cord and placenta. One of the twins had talipes-equino-varus. The external genitalia were single and of female type. One of the twins took a few gasps and then died. The other one was stillborn Total weight of the twins was 2200 gms. (Fig. 1).

The postpartum period of the patient was uneventful and she was discharged on the 7th day.

**Autopsy findings**

A partial autopsy was done. On external examination the following features were noted. (Figs. 2 & 3).

1. Two heads and necks.
2. Abdomen and thorax were joined on their ventral aspects.

On opening the thorax and abdomen,

1. Single bony thoracic cage.
2. Two hearts placed in mirror image fashion and two sets of great vessels.
3. Single pericardial sac.
4. Alimentary canals were separate from the oesophagus up to the last 3 inches of the ileum. The remaining part of the canal was single.
5. Internal genital organs — single set (female).
6. Liver and spleen — one each.
7. Kidneys — one in each twin.

*Discussion*

Of all malformations, conjoined twins or double monsters are without doubt the most spectacular. Ballantyne (1902) wrote, "Few medical men are called upon to conduct a case of labour in which the product consists of a double monster and even obstetricians of considerable experience will see no more than two or three confinements so complicated in a life-time. Nevertheless, a practitioner may find himself any day face to face with such an obstetric emergency".

The mode of formation of conjoined twins is interesting. The difference between this variety and the separate twins, which are much more frequent, lies only at the stage of separation of the cells forming the embryonic mass. Conjoined twins are usually assumed to be of monovular type. If the separation of the cell masses occurs after the separation of the embryonic disc, then there will be only one embryonic sac and at this stage, if the centres of the growth of the two cell masses are not sufficiently apart, then the intermediate portion between the two may be fused resulting in conjoined twins.

Various varieties of conjoined twins have been described according to the extent of fusion as well as the sites of fusion. In all the varieties, there may be various degrees of union of the internal organs. These different varieties have been enumerated as follows (Farris and Bishop, 1950):

1. Craniopagus (joined by the heads). 2. Thoracopagus (joined at the chest). 3. Xiphipagus (joined at the lower sternum). 4. Omphalopagus (joined at the naval). 5. Pygopagus (joined at the pelvis). 6. Foetus in faeto or included foetus (One twin included in the body cavity of the other).

Among double monsters, the commonest are thoracopagus twins. The other varieties in order of frequency are pygopagus and ischiopagus, where the fusion is in lower pelvic region and craniopagus. Robertson's (1953) figures are as follows: thoracopagus 73%, pygopagus 19%, ischiopagus 6%, craniopagus 2%.

There is a distinct preponderance of females among conjoined twins, especially thoracopagus. Guttmacher (1962) found that 70% of conjoined twins were female.

The criteria for the prenatal radiological diagnosis of conjoined twins have been elaborated by Gray, *et al* (1950) and discussed by Gupta and Wakhaloo (1968). The important features in the X-ray are: 1. the heads are at the same level and plane, 2. there is unusual extension of the spines, 3. there is unusual proximity of the spines, 4. there is no change in the relative positions after movement, manipulation and time.

The obstetric management of conjoined twins may, at times, present no difficulty as such pregnancies rarely go on to term, so that the conjoined foetuses may not exceed the size of a normal single foetus. This was so in this case because the combined weight of the twins was 2200 gms. and although the condition was diagnosed at the time of delivery, there was no difficulty in delivering the babies vaginally. Otherwise, when

the twins are large and when a correct diagnosis before the onset of labour has been made, delivery by caesarean section is the method of choice. This is safe for the mother and in the best interest of the babies.

The prenatal diagnosis in a case of conjoined twin is becoming increasingly important because of the feasibility of separation of these twins due to advancements in surgery.

*Summary*

A rare variety of conjoined twins in which the trunks of the two babies were fused, with four upper and three lower limbs, is reported.

The diagnosis was made at the time of delivery. There was no difficulty in delivery as it was a premature labour.

Relevant literature has been reviewed and the mode of formation and the different types of this rare anomaly have been discussed.

*Acknowledgements*

We are grateful to Dr. H. C. Dhawan, Medical Superintendent, Nehru Hospital, attached to the Postgraduate Institute of Medical Education and Research, Chandigarh, for permitting us to publish this case report.

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*Figs. on Art Paper VI*